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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,469	07/15/2004	Shin Aihara	254785US0PCT	5141
22850 7590 06/14/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER DEL COTTO, GREGORY R	
			ART UNIT	PAPER NUMBER
			1751	
			NOTIFICATION DATE	DELIVERY MODE
			06/14/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/500,469

Applicant(s)

AIHARA ET AL.

Examiner

Gregory R. Del Cotto

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3 and 12-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3 and 12-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 3 and 12-17 are pending. Claims 1, 2, and 4-11 have been canceled.

Applicant's arguments and amendments filed 3/21/07 have been entered.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Objections/Rejections Withdrawn

The following objections/rejections as set forth in the Office action mailed 12/21/06 have been withdrawn:

The rejection of claims 3 and 12-15 under 35 U.S.C. 103(a) as being unpatentable over Jeschke et al (6,251,849) in view of Pucci et al (US 5,872,088) and Aubay et al (US 6,703,358) has been withdrawn.

The rejection of claims 3 and 12- on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5, 6, 8, and 9 of copending Application No. 10/500859 has been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to instant claim 17, the specification, as originally filed, provides no basis for a lower limit of "2/3" as recited in line 2.

Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to instant claim 17, it is vague and indefinite in that it is unclear what is meant by "2/3". For purposes of examination, the Examiner has interpreted this to be a lower limit of 0.67. Clarification is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aubay et al (6,593,288) in view of Pucci et al (US 5,872,088) or Aubay et al (US 6,703,358).

'288 teaches the use of a water-soluble or water-dispersible copolymer comprising monomers including dimethyldiallylammonium chloride, at least one hydrophilic monomer, and optionally at least one hydrophilic monomer compound containing ethylenic unsaturation and of neutral charge, on hard surfaces to give a hard surface hydrophilic properties. See Abstract. The copolymer preferably has a molecular weight of at least 1000, advantageously of at least 10,000. See column 3, lines 35-45. The copolymers are used in compositions for cleaning ceramics such as bathrooms, sinks, shower walls, toilet pans, etc. See column 5, lines 40-55. The polymers containing DADMAC have hydrophilic properties to give the hard surface long-lasting hydrophilic properties so as to avoid the subsequent presence of marks due in particular to the drying of droplets of water deposited on said surface. See column 1, lines 5-15. Additionally, the compositions contain surfactants. See column 11, lines 50-65. Specifically, '288 teaches a detergent formulation for cleaning hard surfaces such

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as tiles, sinks, baths, etc. containing 24% sodium sulfonate, 5% ethoxylated C12 fatty alcohol, 4% ethanol, polymer, and water. Note that, the Examiner asserts that the teachings of '288 suggest compositions having the same antifouling properties as recited by the instant claims because '288 suggest compositions containing the same components in the same proportions as recited by the instant claims.

'288 does not teach a method of antifouling and washing hard surfaces of toilet bowls using a composition containing the specific cationic polymer, surfactant, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

Pucci et al teach hard surface cleaning compositions which are viscous but at the same time easy to rinse. Such compositions are formulated by using a linear C6-C16 alcohol and/or linear alkoxylated C6-C16 alcohol, a hydrotropic solvent, and an anionic surfactant. See Abstract. An advantage of the viscous compositions is that they may be used in a wide range of applications in bathrooms, kitchens, floors, and especially on any vertical surface like walls, toilet bowls, and the like. See column 2, lines 5-15. The compositions of the present invention comprise from 0.1% to 20% by weight of the total compositions of said linear alcohol. See column 3, lines 30-40.

Aubay et al teach a cleaning composition for hard surfaces including ceramic, tile or glass-type comprising at least one surfactant and a water soluble or water-dispersible copolymer. See Abstract and column 1, lines 1-5. The copolymer according to the invention advantageously has a weight-average molecular mass of at least 1000 up to 10,000,000. See column 3, lines 1-10. The composition may also be used for cleaning

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toilet bowls and includes from 0.05% to 5% by weight of a water-soluble or water-dispersible copolymer, from 0.1 to 40% by weight of an inorganic acid cleaning agent, from 0.5 to 10% by weight of a surfactant, from 0.1 to 3% by weight of a thickener, and additives. See claim 6.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the composition as taught by '288 to clean toilet bowls, with a reasonable expectation of success, because '358 or Pucci et al teach the use of a similar composition for cleaning hard surfaces in general including toilet bowls and further, '288 teaches the cleaning of bathroom hard surfaces in general which would encompass toilet bowls.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to antifoul and wash hard surfaces of toilet bowls using a composition containing the specific cationic polymer, surfactant, and the other requisite components of the composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the broad teachings of '288 in combination with '358 or Pucci et al suggest a method of antifouling and washing hard surfaces of toilet bowls using a composition containing the specific cationic polymer, surfactant, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

Claims 3 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pucci et al (US 5,872,088) or Aubay et al (US 6,703,358), both in view of Aubay et al (US 6,593,288).

Pucci et al or '358 are relied upon as set forth above. However, neither reference teaches the use of the specific polymer or a method of cleaning a toilet bowl using a composition containing the specific cationic polymer, surfactant, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

It would have been obvious to use the specific polymer containing DADMAC monomer in the composition taught by Pucci et al or '358, with a reasonable expectation of success, because '288 teaches the advantageous non-spotting properties imparted to a similar hard surface cleaning composition when using the specific polymer containing DADMAC monomer, and further, such non-spotting properties would be aesthetically desirable for toilet bowl cleaning compositions as taught by Pucci et al or '358.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to antifoul and wash hard surfaces of toilet bowls using a composition containing the specific cationic polymer, surfactant, and the other requisite components of the composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the broad teachings of '358 or Pucci et al, both in combination with '288 suggest a method of antifouling and washing hard surfaces of toilet bowls using a composition containing the specific cationic polymer, surfactant, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

Response to Arguments

With respect to '288, Applicant states that while '288 generally describes polymer compositions for use on various hard surfaces, there is no showing or indication of antifouling and washing the hard surfaces of toilet bowls with a composition having a monomer ratio in the claimed range. Additionally, Applicant states that there is no suggestion in '288 of improved anti-fouling performance if the amount of quaternized amine were to exceed that of a second polymerizable monomer and that in each of inventive polymers 1, 2, 3, and 7, the amount of quaternized amine monomer is less than that of the second polymerizable monomer. In response, note that, the Examiner maintains that '288 clearly teaches polymers in which the molar amount of quaternized amine exceeds that of a second polymerizable monomer since '288 teaches that the polymer has a molar ratio of a/b of 60/40. See Abstract. This would correspond to a molar ratio of $A/(A+B)$ or $60/40+60$ of 0.6 which falls within the molar ratio as recited by the instant claims. Additionally, note that a molar ratio of 0.5 of $A/(A+B)$ as recited by the instant claims would represent equal molar amounts of monomer A and monomer B. For example, a molar ratio of 0.5 = 5 moles of A/(5 moles of A + 5 moles of B) wherein the molar amounts of A and B are equal. Thus, inventive polymer 1 of '288 which teaches a molar ratio of a/b of 50/50 would represent a molar ratio of 0.5 when calculating total moles of $A/(\text{moles of A} + \text{moles of B})$ which falls within the scope of the instant claims. Thus, contrary to Applicant's assertion, the Examiner asserts that a lower limit of 0.5 as recited by the instant claims does not require that the amount of quaternized amine exceeds that amount of a second polymerizable monomer.

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Additionally, the Examiner maintains that the broad teachings of '288 in combination with Pucci et al or '358 are sufficient to render the instant claims obvious under 35 USC 103(a). Pucci et al and '358 are secondary references relied upon for their teaching of the use of a similar cleaning composition on toilet bowl surfaces. The Examiner maintains that one of ordinary skill in the art clearly would have been motivated to use the composition as taught by '288 to clean toilet bowls, with a reasonable expectation of success, because '358 or Pucci et al teach the use of a similar composition for cleaning hard surfaces in general including toilet bowls and further, '288 teaches the cleaning of bathroom hard surfaces in general which would encompass toilet bowls. Also, with respect to the rejection of the instant claims under 35 USC 103(a) using Pucci et al or '358, both in view of '288, the Examiner maintains that one of ordinary skill in the art clearly would have been motivated to use the specific polymer containing DADMAC monomer in the composition taught by Pucci et al or '358, with a reasonable expectation of success, because '288 teaches the advantageous non-spotting properties imparted to a similar hard surface cleaning composition when using the specific polymer containing DADMAC monomer, and further, such non-spotting properties would be aesthetically desirable for toilet bowl cleaning compositions as taught by Pucci et al or '358.

Furthermore, Applicant states that comparative data is presented in the instant specification which shows the unexpected and superior properties of the claimed invention in comparison to compositions falling outside the scope of the claimed invention. First, note that, as stated above, '288 teaches the same polymers as recited

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by the instant claims and thus, compositions formulated with such polymers would be expected to have the same antifouling properties as recited by the instant claims.

Additionally, the data in specification is not commensurate in scope with the claimed invention. The instant claims encompass thousands of different polymers containing monomers A and B and are open to any amount of polymer while the data presented in specification is limited to several polymers at several specific weight percents (0.5%, 0.02%, 0.2% and 1%) which is not commensurate in scope with the claimed invention. Further, with respect to the comparative examples such as, for example, comparative example 1-3, these examples do not provide a true comparison to claimed invention. Comparative example 1-3 does not contain any surfactant while Examples 1-1 thru 1-10 all contain surfactant so it is not clear if the increased anti-fouling properties are attributed to the presence of the surfactant in combination with the polymer or just the polymer itself. Additionally, note that, the Examiner asserts that polymer C, which is used in comparative product 1-1 and shown to have reduced antifouling performance, falls within the scope of the polymer as recited by instant claim 1 which leads to uncertainty as to whether these polymers actually provide increased antifouling properties. Thus, the Examiner asserts that the comparative data presented in the specification is not sufficient to place the instant claims in condition for allowance.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory R. Del Cotto whose telephone number is (571) 272-1312. The examiner can normally be reached on Mon. thru Fri. from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Gregory R. Del Cotto
Primary Examiner
Art Unit 1751

GRD
June 8, 2007